

GrummanWorld

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A Big Texan Welcome. On May 23, the V-22 was officially unveiled at Bell Helicopter's plant in Arlington, Texas. (AP photo)

V-22 Osprey Debuts In Texas

On Monday, May 23, the military's newest aircraft — the V-22 Osprey — made its debut at a rollout ceremony in Fort Worth, Texas.

The Bell-Boeing V-22 is designed to take off like a helicopter and then fly straight ahead like an airplane. Under a full-scale development program, Grumman produced nine all-composite empennages — the fuselage aft of the cargo door including the vertical and horizontal stabilizers, elevator and rudders. (See related article on page 3.)

Marine Commandant Alfred Gray Jr. called the Osprey the Corps' "No. 1 aviation priority" at the rollout ceremony held at Bell Helicopter's facility.

The Marines plan to buy 552 Ospreys for transporting troops, the Air Force will buy 55 for special operations including search and rescue, and the Navy will buy 50 for combat, search and rescue. The Army plans to buy 231 V-22s, but has deferred its procurement for now due to budget constraints. The Navy is studying use of the V-22 for an anti-submarine warfare role.

OV-1D Tries Modernized Cockpit

The first flight of the Grumman OV-1D Mohawk modified under the Army's Block Improvement program took place on Thursday, May 19.

"The flight went extremely well," says Jim Flowers, the program manager.

Mohawk program test pilot Bob Ward and plane captain Ray Harris took off at 10:30 a.m. from the airfield adjoining Grumman's Stuart Operations and returned two and a half hours later.

Under the Block Improvement Program the outdated avionics have been replaced with equipment that is more easily supported. Grumman has added a new autopilot, new communications and navigation equipment, including the Global Positioning System, which is a satellite-based way for the pilot to know exactly where he is. The new cockpit also has a storm scope that plots the small static discharges present in growing storms and the Honeywell-built multifunction video display system.

"The old system had 'iron' gauges," says Ward. "There was a single instrument for air speed, and a single instrument for altitude. With the new system there are two television tubes and you can place different types of displays on them."

The pilot presets needed information, Ward explains. "I can sit on the ground and program all the frequencies of the people I will want to talk to, and headings of all the places I will want to go. In the air I just push a single

button to call that information up."

The original Block Improvement Program only called for the building and testing of this one prototype. However, the program is undergoing a change.

"That program is now referred to as the Multistage Improvement Program," Flowers says. "It will eventually include an engine upgrade, though that is not currently part of the contract. The engines will be an add-on."

The production contract is still being formulated. Like all other Defense Department programs, it is affected by budget cuts and changing Congressional priorities.

"The number of planes under the Multistage Improvement Program fluctuates," says Flowers. "The latest number is 33 aircraft. But the number could be anywhere from 33 to 99 aircraft. We really won't know for another couple of months."

Meanwhile, flight testing will continue on the prototype in Stuart until August of this year. Then the plane will be taken north to Calverton, Long Island, for several more months of testing. The plane will be accompanied by a 15-member Army team, a Grumman plane captain and, as needed, engineering and maintenance people from Stuart.

At Calverton, the plane will first be studied in the anechoic chamber, then begin another round of flight tests. The flight test program will end in December.

Flowers expects the work on the first production Multistage Improvement Program aircraft to start in Fiscal Year 1989, with first delivery sometime in the 1990 calendar year. ■

(See page 2 for related stories.)



Hawkeye Lid. At Aircraft Systems' Stuart Operations in Florida, Thomas L'Heureux works on the cabin roof of an E-2C Hawkeye. (Photo by Jim Ferris)

What's Inside

Sharing A Slice Of The Savings - P. 2

Ninth V-22 Empennage Delivered - P. 3

Who's Watching The Kids? - P. 4

Fellowship Winners Named - P. 6

Current Mohawk Effort Giving Plane Longer Life

Grummanites in Stuart are currently hard at work on another Mohawk project. Under the Program Aircraft Restoration (PAR) contract, they are bringing two fleet aircraft a month to like-new condition and beefing them up under a service life extension effort. Once through the PAR procedure, each plane's life is raised to 12,000 hours from 7,000 hours.

"We anticipate the PAR program will continue at that rate through Fiscal Year 1990, and at a lower rate for some time

thereafter," says Flowers. "If we are committed contractually to the Multistage Improvement program early enough, we may be able to combine the two. That would save the service some money."

Though the OV-1 Mohawk has been out of production since 1970, it continues as the U.S. Army's front-line surveillance aircraft. It has gone through a number of upgrades over the years, the most recent being to the OV-1D and the RV-1D, which is an intelligence gathering version. ■

Grummanites In Calverton Share A Slice Of The Savings

Calverton Operations was the only participating center in the Pride of Workmanship Master Craftsmanship Program to beat its rework goal for 1987. For their success, 255 Grummanites in 12 Manufacturing teams took home checks worth up to \$200. Others in Inspection and Quality Engineering received gift certificates for their support of the program.

"Our continuing investment in Calverton's Master Craftsmanship program has proven that people, working together toward common goals, build pride, motivation and performance," said Calverton General Manager Roy Montana. This is Calverton's third Master Craftsmanship award in four years.

The awards were presented on May 20 by Vinny DeStefano, Aircraft Systems vice president—Production Operations, and Norm Reinertsen, vice president—Quality Operations.

Several sites participate in Master Craftsmanship. On Long Island they are Aircraft System's Bethpage Operations and Parts Fabrication, and Calverton Operations. Machine Parts in Glen Arm, Maryland, also participates, along with the Milledgeville, Georgia, and Stuart, Florida, sites. About 6,000 Grummanites are involved.

Teams in each center can earn prizes by bettering monthly defect goals. For the annual awards, teams in each center are grouped and given a rework target based on the previous year's performance and the changing workloads at each site. If the group betters that rate, the members divide 25 percent of the savings among themselves.

Since the Grummanites in Calverton saved the company \$133,600 in rework, it worked out that they split \$33,400 after taxes. Eighty-three people each got \$50, another 70 earned \$100 apiece and 102 people each got \$200 checks.

Some Grummanites in Quality Engineering and Inspection received gift certificates worth a total of \$1,850.

Administrator Edith Behrmann, who oversees the Calverton program, says that their success is due to their active support of product quality. "It's important to promote the coordination of the manufacturing and quality efforts," she says. "At our monthly quality data review meetings, people from Manufacturing and Quality resolve responsibility for defects and give each other feedback on problems."

"We try hard to improve our communications. It's not a perfect system, but the extra effort makes a difference." ■



First Crew. Grumman test pilot Bob Ward (R) and plane captain Ray Harris not only notched their first flight in the updated Mohawk, but they helped a fellow flier in the process on May 19. This was also the first time Ward piloted a first flight as a Grumman test pilot. (Photo by John Spades)

Block Improvement To The Rescue

Good scout that it is, the updated Mohawk notched a good deed for its first flight.

While running their flight test regimen in the test area, Bob Ward, the pilot, and plane captain Ray Harris got a radio call. "Our tower said there was a plane in our area and asked if we had some time to check it out," Ward recalls. The Mohawk crew did that. They found a lost young flier.

"I think that by the time we got there he had pretty much found his direction, but we stayed with him, just in case," Ward says. Just to be sure, though, they led him to his destination, Pahoehoe Airport, and got him safely on the ground.

Ralph 'Doc' Tripp Dies

Ralph "Doc" Tripp, former vice chairman of Grumman Allied, died May 22 in Cocoa Beach, Florida, at the age of 73.

He already earned his Ph.D. in mathematics when he began his career at Grumman in 1942. "They paid me \$5 a week less than the going rate because I had a doctorate," he said with a smile in 1980. "They didn't want anyone to get the idea they were catering to longhairs."

During his career, he held numerous positions in Test Instrumentation, Flight Test, and in the space program. He was director of both the Orbiting



Astronomical Observatory and the Lunar Module programs; director of Corporate Systems, and director of Great River Operations in Long Island.

He was named executive vice president of Grumman Aerospace in 1975, a position he held until 1979 when he was elected vice chairman of Grumman Allied.

He retired in 1980, but remained with Grumman as a consultant through 1983.

He is survived by his wife LaVone. ■

Enroll Now

Want to learn how to get more from your personal computer? Grumman Data Systems Institute is offering Long Islanders — both Grummanites and non-Grummanites — a \$100 summer discount on its 32-hour personal computer seminar. The regular price is \$595, but for the July 11 and August 8 sessions the price is only \$495. This offer is good only for the classes that start on those two dates. For more information contact GDSI, (516) 364-2055.

Matching Rate

For the third quarter of 1988, the Employee Investment Plan's matching rate will continue to be 50 percent.

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Grumman Delivers Its Ninth V-22 Empennage

On May 23 — the same day as the V-22 rollout in Texas — Grumman delivered its ninth and final V-22 Osprey empennage to Boeing Helicopter in Philadelphia, Pennsylvania.

Grumman Aerostructures was a subcontractor to Boeing Helicopter under the now completed V-22 full-scale development program. The composite detail parts were designed in Melville, L.I., and produced at Milledgeville Operations in Georgia, and then shipped for final assembly to Stuart Operations in Florida.

Aerostructures President Don Schlegel praised the Grummanites who worked on the full-scale development program at all sites. "The empennages were joined to the Boeing V-22 fuselages without a hitch," said Schlegel. "Thanks to the Grumman team effort, we have an excellent track record on the V-22 program."

"During the full-scale development stage, we are supposed to find any problems and fix them before production," said Bill Brown, V-22 program director. "We've learned a great deal during this phase, and we've proved that we can do the job."

Grumman Aerostructures is now preparing its proposal for the V-22 production phase. All bids are due by mid-July. "During the initial phase, called pilot production, one V-22 empennage will be delivered each month for 12 months, starting in June 1990," said Brown. "Then, production really picks up. The V-22 will be produced in lots of 45, 75 and 108 over the next three years." Follow-on orders are expected to be at 108 units per year.

The V-22 teams at Melville, Milledgeville and Stuart are now working on other programs, but they will form the nucleus of the V-22 production team should Grumman win the contract.

The contract is expected to be awarded in the first quarter of 1989. If Grumman is successful, work would start up in Milledgeville next summer; final assembly in Stuart would begin in early 1990. ■



A Strong Foundation. On May 23, Grumman delivered its ninth and final V-22 Osprey empennage to Boeing Helicopter, completing its full-scale development contract. Grumman Aerostructures is now preparing its proposal for the V-22 production phase. The composite detail parts were designed in Melville, L.I., and produced at Milledgeville, Georgia; then shipped for final assembly to Stuart Operations in Florida. Above, Kevin Woodwell (L) and Frank Nargas (R) check out a V-22 front spar at Stuart. At left, a completed V-22 vertical fin is disassembled at Stuart for shipment to Boeing by Bill Kirchner (L), leadman Les Kindberg (C), and Bob Stiger. (Photos by Jim Ferris)

Summer Puts Pressure On Blood Banks

Now that summer's almost here, your blood donation is needed more than ever by Long Island Blood Services.

Blood supplies fall during the summer months for a host of reasons. For instance, college students are among the most generous donors. But colleges don't have blood drives during the summer because a lot of their students go home for the break.

Neither do local churches and synagogues, which trim their social activities for the summer.

Corporate donations fall off, too. At Grumman and other companies, many employees take their vacations in the summer and forget to donate blood.

In addition, donations have fallen due to misconceptions about AIDS (Acquired Immune Deficiency Syndrome). It is scientifically impossible to contract AIDS from giving blood: a sterile, individual needle and harness are used when you donate and then discarded. Yet the myth persists.

While this is all going on, there is no drop in the need for blood. In fact, more people are on the road in the summertime — going to the beach, mountains, vacation, et cetera. So there are more traffic accidents, placing an even greater strain on the blood supply.

The Grumman Blood Program visits most Grumman

facilities on Long Island. If you can't make it to the drive in your building, you're free to donate at any other Grumman blood drive. In addition, you don't have to be registered with the program to donate. Just show up at the drive that day.

The need for blood during summer months is just as acute in areas off Long Island. Most of those facilities have blood drives, too, and Grummanites have been generous donors. Contact your plant manager or department administrator for more information.

You can also go directly to your local blood bank or hospital to give. ■

Obituaries

Anthony J. Gancio of Mechanical Detail and Finish, Great River, Electronics Systems Division, died May 18 at the age of 59. He had been with the company since 1953 and resided at 87 Washington St., East Islip, N.Y.

Vincent T. Bonsignore of Procurement, Pt. Mugu, Aircraft Systems Division, died May 15 at the age of 50. He had been with the company since 1965 and resided at 1250 Clinton Ave., Ventura, California.



Mom And Her Girls. Joyce Sparling of the Corporate Services Division and her daughters Linda and Laura (R) live in Floral Park, L.I. Linda stays with a babysitter, while neighbors watch her sister before and after school.

While Mom And Dad Work, Who's Watching The Kids?

The Cleavers never had to worry about who was going to watch the Beaver after school. However, a growing number of today's parents face the problem of who's going to mind junior while they are at work.

In the '80s, women like June Cleaver are in the minority. Less than a third of all families follow the Cleaver family model, according to the Bureau of Labor Statistics. Nearly half the work force is made up of single parents and working couples who have children. More than half of the 45 million kids in two-parent families have both parents working.

"In the past decade, child care is no longer just a women's issue — it has become society's issue. It has a great impact on our economy," says Dr. Sherry Radowitz, program director of the Nassau County Day Care Council. The council and its affiliate — Child Care Council of Suffolk County — offer referral services for Long Islanders seeking day care for their children. "In the past two years, we've been inundated with calls from working parents," says Dr. Radowitz.

In the two counties, there are over 7,300 children attending 135 licensed day care centers. The cost of these centers ranges from \$50 to \$250 a week, with most averaging around \$100;

infant care is slightly higher.

In addition, parents also use family day care in which typically a half dozen children are supervised in a neighbor's house. Private babysitters, grandparents, or after-school programs sponsored by school districts and civic organizations are other common arrangements.

Since the late '70s, Grummanites have been able to set up flexible spending accounts for dependent care. The money is taken out of their paychecks before taxes. "Unfortunately, only 200 people have elected to use this option," says Judy Sanders, senior research specialist in Human Resource Planning.

Only 200 people have elected to use flexible spending accounts for dependent care.

Sanders believes one of the reasons for the light signup is that many people pay for day care off-the-books. Others might shy away from the program because it is a use-it-or-lose-it proposition. If, for instance, a relative volunteers to watch the children after school, the \$4,000 set aside for a babysitter won't be used up by the end of the year.

In addition, working parents

did not escape the recent tax reforms. As of January 1, 1988, overnight summer camps are no longer tax deductible. Therefore, overnight camps cannot be funded with a Grumman flexible spending account. Fortunately, all other rules concerning child care expenses have not changed. Expenses eligible for credit include costs for day care, nursery school, a housekeeper or other home care and summer day camps.

Working parents find searching for an affordable, quality child care program can be a nightmare. Dr. Anita D'Amico is a senior engineer in Human Factors for the Aircraft Systems Division. "I devoted a full eight days to finding someone to care for my son before I returned to work in December," says D'Amico. "I ran two ads in the newspaper, received 130 calls, interviewed 80 people on the phone, and invited four to my home to meet the family." A woman who raised her own three children is watching D'Amico's son at the family apartment in Little Neck.

D'Amico is spending around \$40 a day for child care. She's satisfied for the moment, but dreads starting the search again if the babysitter quits.

Benny Watson, a resource planner at Milledgeville Operations in Georgia, and his

wife Susan spend about \$45 a week to have their 2½-year-old son, Hunter, attend the Tamberlane Day Care Center. Hunter started on a part-time basis when he was 6 months old. When he turned one, he attended full time.

"Financially, it would have helped us a lot if Susan could have worked full time from the beginning," says Watson. "But, we weren't emotionally ready to leave the baby with anyone any sooner."

Benny usually stays home when Hunter gets sick, since he has more paid time off accumulated.

A new term has entered our vocabulary — the 'three o'clock syndrome.'

Bob Koch, manager of Business Development for the Boost Surveillance Tracking System (BSTS) in the Space Systems Division, drives to and from work with his two-year-old son Robbie. "He's cranky in the morning, until I start rattling off his friends' names. Then he gets excited about going to the day care center," says Koch, who lives in Holtsville. "But we have a great time talking on the way home at night."

He and his wife Joann enrolled Robbie in the SUNY Farmingdale Day Care Center before he was born. "Preference is given to students at the college, so there is a waiting list for outsiders," says Koch, who spends around \$100 a week on



Commuting With Daddy. Robbie and Bob commuting from their home in Holtsville, L.I. to the Day Care Center; Bob works for Space Systems Division.

tuition. There are three levels at the center — infant, Toddler 1 and Toddler 2. Robbie is now a student in Toddler 1 and a strong candidate for Toddler 2, boasts Koch.

“My wife is six months pregnant,” says Koch. “We’re very pleased with the day care center — and I think there’s even a discount for brothers and sisters.”

Joyce Sparling, administrator of Quality of Life programs for Corporate Training, adopted two children last June. Linda is 2½ and Laura is 8 years old. Sparling had to find after-school care plus infant day care.

“I anticipated some problems, but I thought nothing would be insurmountable,” she says. However, it did prove to be a frustrating job that took several weeks.

“Through a family friend, I found an older woman to babysit Linda during the day, but she lives on the other side of Floral Park — too far for Laura to go to after school.” After false starts with inadequate or unreliable babysitters for after-school care, Sparling is finally pleased with the arrangements. A woman in her apartment building watches Laura before school; a neighbor across the street cares for her after school.

According to a report in *The Harvard Business Review*, a new term has entered the business world’s vocabulary: the “three o’clock syndrome.” It refers to reduced productivity and higher error and accident rates as employees’ minds turn to their



Jimmy And His Dad. In Lindenhurst, L.I., Jimmy Turney participates in his school district’s after-school program, while his father George works for Aircraft Systems.

children around the time when school lets out. According to a *Fortune* article, researchers maintain that working parents leave a half-million preschool children at home alone at least part of the

(Continued on page 6)

Helping In The Search

Finding qualified day care providers is a chore. To help in this search for a qualified person, Grumman will reimburse you up to \$50 a year for expenses incurred in your investigation. These expenses include ads you may place in newspapers, fees you pay to agencies, donations you may be expected to make to child care councils, travel to and from the agency, etc. If you have incurred such expenses and wish to be reimbursed, this is what you should do:

- Complete a regular expense report with all the necessary signatures.
- Attach original receipted bills for your expenses.
- Put charge number 5093 on the expense report form.
- Forward these items to Jack Barton, BI9-030.

Child Care Survey Results

The March 25th issue of *Grumman World* featured a child care survey. Over 460 Grummanites from 21 company sites participated. The responses were still arriving just a few weeks ago. The survey results have been tabulated and are now being used by the company to conduct a study of Grumman people’s child care concerns. Here are the results:

Respondents	Percent
Male	25.7%
Female	45.2%
No answer*	29.1%

*This was the first box people were asked to fill in. Many people didn’t realize that they would remain anonymous, so they skipped this box and never went back to fill it in.

Married	83.3%
Single	15.4%
No answer	1.3%

Respondents with children	43.7%
Respondents without children*	56.3%

*22 respondents are expecting babies.

Respondents with children: 54.0% had one child; 36.7% had two children; 9.3% had three or more children

Age range of children (410 children): 1 Year, 11.9%; 1-2 Years, 23.1%; 3-4 Years, 21.4%; 5-6 Years, 17.8%; 7-8 Years, 8.2%; 9-10 Years, 6.5%; 11-12 Years, 5.1%; 13-14 Years, 2.4%; 14 Years, 3.1%.

In the last 12 months, how many times have your child care arrangements changed?

None	32.4%
Once	18.1%
Twice	20.5%
Three or more	23.6%
No answer	5.4%

Who watches your children while you work?

Spouse (because it is preferred)	8.9%
Spouse (because adequate care not found)	9.5%
Family members	19.8%
Babysitter	25.3%
Day care facility	16.6%
Children in school	19.5%

If children are in school, who watches them after school?*

Spouse/family member	29.5%
Babysitter	38.7%
Siblings/kids old enough to be alone	12.6%
Day care facility	11.9%
School program	7.0%

*More than one response was accepted if applicable.

Would you prefer a provided that is close to:

Respondents	Total
Home	20.4%
Work	63.5%
Family members	0.2%
Home & work	13.0%
No answer	2.8%

In the next five years will you have a need for child care services?

	Total	No Kids	With Kids
Yes	93.3%	96.5%	90.7%
No	5.4%	2.9%	7.3%
No answer	1.3%	0.4%	1.9%

Are you pleased with the availability of providers in your area?

Yes	7.6%	1.4%	12.4%
No	76.7%	74.1%	78.8%
No answer	15.7%	24.3%	8.9%

Are you pleased with the services offered by providers in your area?

Yes	11.1%	0.9%	18.9%
No	62.6%	56.7%	67.2%
No answer	26.3%	42.2%	13.9%

Distribution of respondents by work site: Bethpage, 51.5%; Woodbury, 12.6%; Melville, 11.1%; Great River, 6.5%; Calverton, 3.9%; Stuart, 3.7%; Melbourne, 3.5%; The following had one percent or less: Milledgeville, St. Augustine, Holtsville, Reston, Bohemia, McLean, Montgomery, Pt. Mugu, Benton Park, Charleston, Dallas, Houston, Washington. 401 of 460 responses were from Long Island (87.2%).



ch spend several hours each day Robbie attends SUNY Farmingdale Day

Talented Nine Named Grumman Fellows

Science and Engineering Master's Fellowships were awarded to nine Grummanites who work on Long Island.

Fifty-three Grummanites had applied. Twenty-two applicants participated in the final competition.

Under the fellowship program, Grumman pays all costs for tuition, books and fees towards a master's degree. In addition, the winners get a \$1,200 tax-free stipend to cover study time they must take off from their jobs. The nine will also work four six-month tours in different areas. These areas are matched as closely as possible to their interests and career goals.

Here are the nine fellows:

Mark Behan works in Aircraft Systems' Technical Operations in Bethpage. Behan earned his bachelor's degree in manufacturing engineering from Central Connecticut State University. He plans to concentrate on material science for his master's degree in engineering.



Michael Briganti is a member of the Space Systems Division's Mechanical Design group in Bethpage. He already holds an MBA from St. John's University and a bachelor's in mechanical engineering from Lafayette University. He will earn a master's in mechanical engineering, concentrating on control and systems dynamics.



Robert Davidsen is a member of Aircraft Systems' Master Dimensions group in Bethpage. Davidsen is a graduate of the Massachusetts Institute of Technology, where he studied computer science. He is going to emphasize software systems in his computer science graduate program.



Lawrence Dobkowski works in Flight Test Instrumentation-Mechanical Design on the X-29A in Bethpage. He holds bachelor's degrees in physics from Adelphi University and mechanical engineering from New York Polytechnic University. Dobkowski will concentrate on mechanical design and analysis for his master's degree



in mechanical engineering.

Thomas Doran is a member of Space Systems' Flight Controls group in Bethpage. He majored in mechanical and aerospace engineering at Princeton University and he plans to go on for a master's in electrical engineering, concentrating in control systems.



Jay Fiacco is a member of Aircraft Systems' Optics and Display Systems group in Melville, Long Island. Under a five-year, dual degree program, Fiacco earned a bachelor of science in electrical engineering from the University of Connecticut and a bachelor of arts from Fairfield University. He plans to concentrate on microwave and RF system/circuit design for his master's.



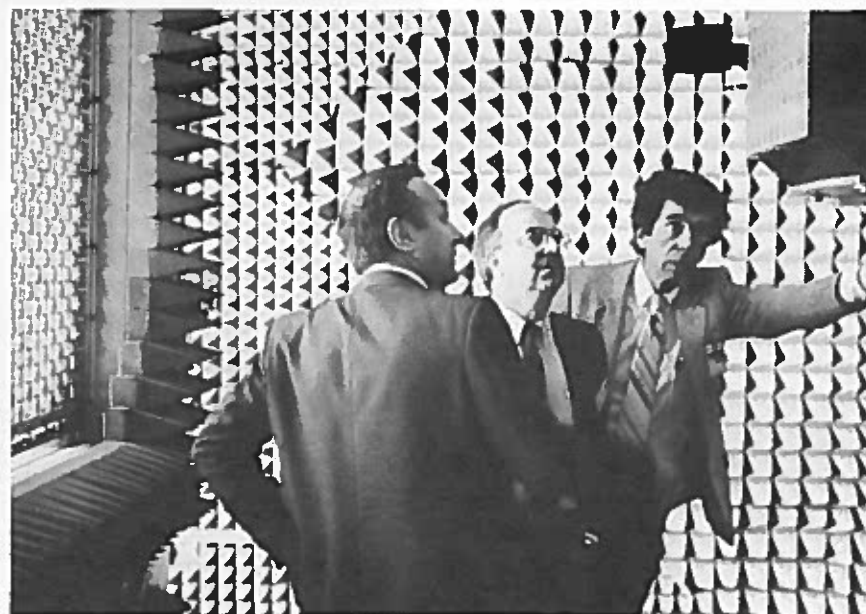
Richard Giannotti works in Melville as a member of Aerostructures' C-17 structural analysis team. At the State University of New York at Stony Brook he earned a bachelor's degree in mechanical engineering. Giannotti is going to concentrate on structural engineering for his master's in civil engineering.



Tracy Ann Kelly works in Melville in Aircraft Systems' ILS Data Systems group. She holds a bachelor's degree in computer science from C.W. Post/Long Island University. Kelly plans to specialize in computer engineering for her master's in computer science.



Michael Peacock works in Bethpage in Aircraft Systems' Thermodynamics group. He holds bachelor's degrees from the City University of New York in psychology and mechanical engineering. His goal is to earn a master's in mechanical engineering, emphasizing thermodynamics, fluid dynamics and heat transfer.



Top View. Chief SDI Scientist O'Dean Judd (C) views Grumman space-based radar demonstrator with John Diglio (L), director, Space-Based Radar Programs, and Don Kerbs, engineering specialist. This demonstrator is in Building 14 in Bethpage.

Top Pentagon Scientist Visits Grumman

O'Dean Judd, chief scientist for the Pentagon's Strategic Defense Initiative, visited Grumman Headquarters on May 20. Judd conducted a seminar on SDI for Grumman senior management.

Judd noted that currently the president has only two options if faced with a nuclear attack: allowing enemy missiles to strike their targets, killing millions, or launching a counterattack, which would cause global nuclear devastation. SDI would give the president a third choice: stopping all or most enemy missiles.

Who's Watching The Kids?

(Continued from page 5)
day. In addition, seven million "latch-key" children from 6 to 12 years old fend for themselves after school until their parents return home from work.

George Turney, a senior rivetter in the Major Assemblies Department in Building 2, is a Grummanite who doesn't have to worry about his 7-year-old son Jimmy. Their Lindenhurst, Long Island, school district has an after-school program.

"So far, it's been great," says Turney. Under the program, neighborhood youngsters are supervised in two local schools until 6 p.m. "The kids can go to the library to do homework. There are teachers available for extra help, and there is a gym teacher to supervise sports." The program costs Turney around \$24 a week.

While the school year might be taken care of, there is still the problem of summer vacation. Turney has to pay a bundle for a fulltime babysitter in the summer.

All the best laid plans can go bonkers if your babysitter gets sick — or your child comes down with the chicken pox on a Monday morning. A lot of people are forced to take off from work and scurry around trying to arrange for grandparents, relatives or friends to watch their children. "If my son is sick the night before, I

usually arrange for my mother to take care of him," says Turney, "but there have been times when he wakes up sick and I've had to take a day off."

Susan Jones and her husband Frankie spend \$88 a week to send their sons, 5-year-old Jedidiah and 18-month-old Dylan to the Children's Friend Day Care Center in Baldwin County, Georgia. It's about five minutes from Grumman's Milledgeville Operations where Susan works as a program planner in the Program and Planning Department.

The boys have been attending the day care center since they were about 7 weeks old. "The day starts anywhere from 3:30 to 5:30 a.m., depending on when Dylan wants to eat," says Jones. "I drop the kids off at 7:15 in the morning," says Jones. "Jedidiah is starting to get bored with the center. He will start kindergarten — a full day here — in September.

"If his school hours are different from my work hours, I can drop him off at the center in the morning," adds Jones. "They will give him breakfast and then drive him to school." The center will pick him up and watch him after school, too.

"It breaks your heart sometimes," says Jones. "when they look up at you and say, 'You're not too far away from me, are you, Mommy?'" ■

**Next issue:
June 24**

Early Detection Of Breast Cancer Can Save Your Life

At some time during adult life, one out of every 10 American women develops breast cancer. The American Cancer Society reports that this year breast cancer will kill 40,000 women.

Early detection saves lives. The Grumman Medical Department recently offered mammography testing to Grumman women in Bethpage and there are plans to offer the testing at other Grumman facilities.

While most labs charge about \$150 for the test, Grummanites pay only \$65 and are reimbursed if insured with Travelers. The Grumman Medical Department feels this is a well-spent investment.

"We strongly believe in preventive treatment," says John Brody, Grumman's Medical Services manager. "We want to encourage people to lead healthy life styles and to take precautions for their own well-being."

To date, the American Cancer Society reports that there is no scientific way to prevent cancer, and no breakthroughs are expected in the near future. However, the mammogram, which is basically an X-ray, can be an effective weapon. It is estimated that the test could save the lives of over 12,000 women a year.

Mammography can detect small lumps in the breast at an early stage when there is less

chance that cancer may have already spread. By the time a woman can feel a lump, it is sometimes already two to three centimeters in size and almost six years old. Mammography can detect a lump of less than one centimeter.

Dr. Robert G. Somers, director of the Breast Cancer Program at Albert Einstein Medical Center in Philadelphia, Pennsylvania, says that women whose lumps are already palpable have a higher risk of their cancer spreading to the lymph nodes than women whose lumps are found by mammography.

Breast cancer can spread in three ways: by growing into the neighboring tissues; by traveling to the lymph nodes under the arm and behind the breastbone; and by being distributed throughout the body by the bloodstream.

When breast cancer is found in its early stages, cure rates are almost 100 percent. A study conducted by the National Cancer Institute determined the mammography to be 91 percent effective in detecting cancer.

But how do you know when to be tested? The American Cancer Society recommends that all women between the ages of 35 and 40 should have a mammogram done to be used in later years for comparison purposes. Women between the ages of 40 and 49 should be

tested every one to two years, even if there are no symptoms present. Women ages 50 and over should be tested yearly.

The Mammo Van-Guard Corporation is the mobile screening mammography service Grumman selected to administer the tests. "They are one of the few companies with equipment capable of being set up inside a private area," says Brody.

Often companies that travel to organizations conduct the tests from a van parked in a nearby parking lot. "It's usually quite small and uncomfortable," says Brody.

Mammo Van-Guard has portable equipment that can be set up wherever is most convenient. Grumman chose the Medical Department in Headquarters for the testing in Bethpage. "We wanted to provide privacy, comfort and convenience," says Brody.

Including 10 minutes to fill out a medical history form, the test takes about 20 minutes.

The procedure is administered by trained X-ray technicians and interpreted by board-certified radiologists. Results of the tests are available within 72 hours and they are kept confidential. Mammo Van-Guard will mail one copy of the results to the patient's home and another copy to a personal physician. The Grumman Medical Department is on hand to answer questions and make

Cancer's Seven Warning Signals

- Change in bowel or bladder habits
- A sore that does not heal
- Unusual bleeding or discharge
- Thickening or lump in breast or elsewhere
- Indigestion or difficulty in swallowing
- Obvious change in wart or mole
- Nagging cough or hoarseness

referrals to outside physicians, if necessary.

While payment for the mammography is due the day of the test, cash, checks and credit cards are acceptable.

Grummanites who are insured with Travelers and are 50 years of age and older will be reimbursed for one mammogram test a year. For those between the ages of 40 and 50, Travelers will pay for one mammogram test every two years. They will reimburse women under 40 if a doctor writes a prescription for the test.

For more information about mammography testing, call the Grumman Medical Department at (516) 575-2101. ■

Kit Detects Colorectal Cancer

The Grumman Medical Department is offering the services of the National Health Scan of Greenlawn for early detection of colorectal cancer — cancer of the colon and rectum.

For \$4, you can get a stool blood test kit and a complete analysis. "It's a small price to pay for detecting a problem that with treatment can most times be cured," says Ada Colter of Grumman's Medical Department. Simple directions come with the kit.

Every year about 130,000

American adults develop colorectal cancer. It is the second most common cancer after lung cancer. It usually occurs after age 50, and slightly more often in women than men.

However, early detection and prompt treatment pay off. The American Cancer Society reports that three out of four colon and rectal cancer patients can return to normal active lives.

For more information, call Colter at (516) 575-3723. For the Colorectal Health Check Kit, fill out the coupon below. ■

Readership Survey

We don't want to do all the talking. We'd like to know what you think about the things you see in these pages. Your comments, suggestions and complaints are welcomed. Please take a few minutes and give us your opinions.

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Please send me a Colorectal Health Check test kit.

Grummanite's Name
Address Town
State Zip Code

Mail to: National Health Scan
P.O. Box 33 Greenlawn, NY 11740

Enclose \$4.00 for complete test and analysis.

GrummanWorld

June 10, 1988



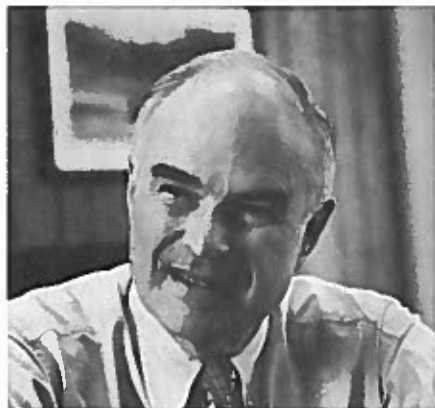
Putting The Place In Order

As a honeycomb assembler in the Honeycomb Metal Bond Department at Grumman's Milledgeville Operations, Elred Jackson keeps things in order.

When the honeycomb detail parts for the G-IV nacelles arrive at his workstation, Jackson puts them in the order in which they will be bonded in the autoclave. Once out of the autoclave, the parts are shipped to Stuart for final assembly.

Composite material is cut to size, shaped under a vacuum on a mold form, and cured under pressure in an autoclave to harden the resin and join the plies into a solid laminate.

A Letter From The Chairman



Sometimes you just know you have a winner. In 1975, Grumman engineers were working on an independent research and development program for an unusual radar concept. It went through a number of incarnations, assorted snags and false starts — but we never lost the thread. Today that radar concept is the basis for Joint STARS, the battlefield management system Grumman is developing for the Air Force and the Army.

The Melbourne Systems Division is home to the Joint STARS program. It's a huge, complicated job — not just for Melbourne, but also for our partners, especially Norden. As difficult as the program is, its success is strongly abetted by the cooperation between Grumman and the Air Force.

Joint STARS will be able to detect, locate, classify and track enemy formations at long range.

It is also the embodiment of systems integration: making everything work together. It calls for strong software capability, a depth of understanding of electronics systems — and it will call for continuing investment of our resources. We've made that commitment because Joint STARS is vital to Grumman's future: its success is one of our top priorities.

Beyond its importance to Grumman's future, Joint STARS could also play an important role in world peace. We expect that the Department of Defense will buy more than two dozen Joint STARS aircraft. But by the mid-1990s, Joint STARS could become a NATO program as well.

London's International Institute for Strategic Studies issues a yearly assessment of military forces and hardware around the world. Every year, that report — "The Military Balance" — shows that NATO is outgunned by the Warsaw Pact in military personnel and in most categories of conventional land-based weaponry deployed in Europe. The gap in conventional forces grew wider in recent years while Europe was building up its stockpile of medium-range nuclear missiles.

The INF Treaty undoes the work done with medium-range missiles. It is a very necessary

step in the path towards real peace that we hope to be following with the Soviets over the next few years. While we move from what has essentially been a 40-year truce, we must maintain adequate defense capabilities if this peace is to be achieved. This is where Joint STARS can play such an important role.

Joint STARS is a force multiplier. It will make NATO's defense much more effective. As the Soviets come to realize just how invulnerable the defenses of Western Europe will be, then it will be all the more possible and more logical for them to accept an agreement under which they will melt down the excessive tank arsenal that they have built up over the last decades.

This true sense of peace is a bequest that this generation can make to future generations. If it comes, Joint STARS and Grumman will have played a substantial part. Our success in this program and the adoption of Joint STARS by NATO can help make the threat of tanks on Europe's eastern horizon a fading aspect of European memories.

John C. Bierwirth
Chairman

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